AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A demand-supply scheme planning apparatus comprising:

first means for storing data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain, the supply chain including a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity;

second means for inputting an order receipt scheme of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

third means for determining scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the inputted order receipt scheme inputted and for determining a predetermined parameter for each demand-supply step;

fourth means for calculating a profitability index of each demand-supply step of the supply chain based on the scheme data determined and the cost and time data stored by the first means;

fifth means for changing the predetermined parameter making a change in a predetermined parameter of each demand-supply step in the third means, for varying the profitability index thereof of each demand-supply step, wherein the fourth means

<u>calculates a first profitability index for a first version of the supply chain before</u>

<u>making said changes in the predetermined parameters, and calculates a second</u>

<u>profitability index for a second version of the supply chain after making said changes</u>

<u>in the predetermined parameters</u>; and

sixth means for ~~selecting one of the demand-supply steps by which the~~

~~commodity is to be manufactured based upon scheme data that maximizes the~~

~~profitability index calculated by the fourth means, of the scheme data determined by~~

~~the third means using the parameter changed~~ <u>establishing a demand-supply scheme</u>

<u>for manufacturing the commodity by selecting the first or the second calculated</u>

<u>version of the supply chain having the highest profitability index</u>.

2. (Original)   An apparatus according to claim 1, wherein the commodity

includes a product and a part.

3. (Original)   An apparatus according to claim 1, wherein the commodity

include a service.

4. (Original)   An apparatus according to claim 1, wherein the third means

determines an amount of order placement of the demand-supply step, based on at

least an amount of order receipt, an amount of stock, and a target amount of stock of

the demand-supply step.

5. (Currently Amended)   An apparatus according to claim 4, wherein ~~the~~ <u>a</u>

<u>predetermined</u> parameter <u>to be changed</u> includes the target amount of stock, and the

fifth means ~~changes~~ <u>is for changing</u> the target amount of stock.

6. (Currently Amended)   An apparatus according to claim 1, wherein the first means further stores data regarding an order-receivable amount of each demand-supply step, and the fifth means changes a <u>predetermined</u> parameter regarding order receipt~~, as one of the predetermined parameter,~~ within the order-receivable amount.

7. (Currently Amended)   An apparatus according to claim 1, wherein the fifth means <u>is for</u> ~~changes~~ <u>changing</u> a <u>predetermined</u> parameter that sets a starting timing of the order placement step.

8. (Currently Amended) A program stored on a computer readable medium, for a demand-supply scheme planning method, comprising the steps of:

A)   storing first data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain in which a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity;

B)   inputting an order receipt scheme of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

C)   determining scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the <u>inputted</u> order receipt scheme ~~inputted by sequentially changing a variable parameter~~ for each demand-supply step;

D)   calculating a profitability index of <u>a first version of</u> the supply chain based on the scheme data determined and the first data;

E)   ~~changing a value of the variable parameter~~ <u>making a change in a predetermined parameter</u> of each demand-supply step of step C for varying the profitability index ~~thereof~~ <u>of each demand-supply step, wherein step D comprises calculating a first profitability index for a first version of the supply chain before making said changes in the predetermined parameters, and calculating a second profitability index for a second version of the supply chain after making said changes in the predetermined parameters</u>; and

F)   ~~selecting one of the plurality of demand-supply schemes as a manufacturing process by which the commodity is to be produced based upon scheme data that maximizes the profitability index calculated, of the scheme data determined using the variable parameter~~ <u>establishing a demand-supply scheme for manufacturing the commodity by selecting the first or the second calculated version of the supply chain having the highest profitability index</u>

9. (Previously Presented)   A program according to claim 8, wherein the commodity includes a product and a part.

10. (Previously Presented)   A program according to claim 8, wherein the commodity include a service.

11. (Previously Presented)   A program according to claim 8, further comprising determining an amount of order placement of the demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock of the demand-supply step.

12. (Currently Amended)   A program according to claim 11, wherein ~~the parameter includes~~ step E comprises changing a predetermined parameter constituting the target amount of stock.

13. (Currently Amended)   A program according to claim 8, further comprising:

storing data regarding an order-receivable amount of each demand-supply step; and

~~changing a parameter regarding~~ wherein step E comprises changing a predetermined parameter relating to order receipt~~, as one of the variable parameter,~~ within the order-receivable amount.

14. (Currently Amended)   A program according to claim 8, ~~further comprising~~ wherein step E comprises changing a predetermined parameter that sets a starting timing of the order placement step.

15. (Previously Presented) A computer programmed to perform the program according to claim 8.

16.   (Canceled)

17. (Currently Amended)   A demand-supply scheme planning apparatus comprising:

first means for storing first data regarding a cost and a time that are needed between purchase of ~~the~~ a product or a part and shipment of the product in each

demand-supply step of supply chain in which a plurality of demand-supply steps, second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product, and third data regarding targets of stock of the product and the member of each demand-supply step, wherein the each demand-supply step places an order for a product or a member for producing the product upon receiving an order for the product, and that ships the product purchased in accordance with the order placed or that produces and ships the product using the member purchased in accordance with the order placed;

second means for inputting stock records of the product and the member of each demand-supply step of the supply chain;

third means for inputting an order receipt scheme of the product of a demand-supply step located at a shipment-side terminal of the supply chain;

fourth means for calculating a first profitability ~~indexes of variations of~~ index for a first version of the supply chain, and a second profitability index for a second version of the supply chain after making a change in each demand-supply step of the supply chain based on scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step, and the first and second data stored by the first means; and

fifth means for ~~selecting the variation of each demand-supply step which has a maximum profitability index, based on the order receipt scheme inputted and the stock record inputted, and the third data stored by the first means~~ establishing a demand-supply scheme by selecting the first or the second calculated version of the supply chain having the highest profitability index.

18. (Original)   An apparatus according to claim 17, wherein the fifth means determines a deviation between a value obtained by subtracting the order receipt scheme of the demand-supply step located at the shipment-side terminal from the stock record of the demand-supply step and the stock target value of the demand-supply step, as an amount of order placement, and distributing the amount of order placement as order placement to a demand-supply step where the order placement from the demand-supply step at the shipment-side terminal is possible, in such a manner that a profit increases, based on the first and the second data stored by the first means.

19. (Original) An apparatus according to claim 17, further comprising:

sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means; and

seventh means for determining appropriateness of each demand-supply step based on the order receivable range set by the sixth means and the order receipt of each demand-supply step set by the fifth means.

20. (Original) An apparatus according to claim 19, wherein the seventh means determines whether a processing capability of each demand-supply step is excess or insufficient.

21. (Currently Amended) An apparatus according to claim 17, further comprising:

sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means; and

seventh means for determining whether the order receipt of each demand-supply step ~~set~~ <u>used</u> by the fifth means is within the order receivable range set for the corresponding demand-supply step by the sixth means; and

eighth means for, if the seventh means determines that the order receipt is not within the order receivable range, changing the scheme data ~~set~~ <u>used</u> by the fifth means so that the order receipt of the demand-supply step subjected to the determination becomes within the corresponding order receivable range.

22. (Original) An apparatus according to claim 21, wherein the eighth means switches a portion or a whole amount of the order receipt of the demand-supply step subjected to the determination to order receipt of a demand-supply step that is capable of shipping a product identical to that shipped by the demand-supply step subjected to the determination.

23. (Previously Presented) An apparatus according to claim 21, wherein the seventh means changes, in time, at least an amount of the order receipt of the demand-supply step subjected to the determination relative to the order receipt scheme.

24. (Currently Amended) An apparatus according to claim 23, wherein the seventh means determines whether a sum of the changed order receipt and the order receipt ~~set~~ <u>used</u> by the fifth means is within the order receivable range set by

the sixth means, if the eighth means accomplishes order receipt changing, in time, at least an amount of the order receipt.

25. (Original) An apparatus according to claim 21, wherein the eighth means changes at least a portion of the third data of each demand-supply step stored by the first means.

26. (Original) An apparatus according to claim 21, wherein the eighth means changes the scheme data so that the order receipt of each demand-supply step becomes within the corresponding order receivable range and so that the profitability index increase.

27. (Currently Amended)   An apparatus according to claim 17, further comprising output means for outputting the scheme data set used by the fifth means.

28. (Currently Amended)   A program stored on a computer readable medium, for a demand-supply scheme planning method comprising the steps of:
storing first data regarding a cost and a time that are needed between purchase of the a product or a part and shipment of the product in each demand-supply step of a supply chain comprised of a plurality of demand-supply steps, second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product, and third data regarding targets of stock of the product and the member of each demand-supply step, wherein each demand-supply step places an order for a product or a member for producing the product upon receiving an order for the product, and that ships the product

purchased in accordance with the order placed or that produces and ships the

product using the member purchased in accordance with the order placed;

inputting stock records of the product and the member of each demand-

supply step of the supply chain;

inputting an order receipt scheme of the product of a demand-supply step

located at a shipment-side terminal of the supply chain;

calculating a first profitability ~~indexes of~~ index of a first version of the supply

chain and a second profitability index for a second version of the supply chain after

making a change in ~~variations of~~ each demand-supply step of the supply chain,

based on scheme data regarding order receipt, order placement, purchase and

shipment of each demand-supply step, and the first and second data stored by the

first means; and

~~selecting the variation of each demand-supply step which has a maximum~~

~~profitability index, based on the order receipt scheme inputted and the stock record~~

~~inputted, and the third data stored by the first means~~ establishing a demand-supply

scheme by selecting the first or the second calculated version of the supply chain

having the highest profitability index.

29.   (Canceled)

Claims 30-35 (Canceled)

36. (Currently Amended)   An apparatus according to claim 1, further

comprising an adjustment means for adjusting a distribution of the scheme data

regarding the order receipt step, the order placement step, the purchase step and

the supply step for each of the plurality of demand-supply steps ~~to maximize the~~

~~profitability index as a whole supply chain~~.

37. (Currently Amended)   A program according to claim 8, ~~further~~

~~comprising the step of~~ <u>wherein step F includes</u> adjusting a distribution of the scheme

data regarding the order receipt step, the order placement step, the purchase step

and the supply step for each of the plurality of demand-supply steps ~~wherein the~~

~~profitability index as a whole supply chain is maximized~~.

38. (Currently Amended)   An apparatus according to claim 17, wherein said

fifth means adjusts the scheme data regarding order receipt, order placement,

purchase and shipment of each demand-supply step ~~to maximize the profitability~~

~~index~~.

39. (Currently Amended)   A program according to claim 28, ~~further~~

~~including the step of~~ <u>wherein the establishing step includes</u> adjusting the scheme

data regarding order receipt, order placement, purchase and shipment of each

demand-supply step ~~to maximize the profitability index~~.

40. (Currently Amended)   A supply chain distribution scheme planning

apparatus comprising:

a data storage portion that stores parameters for a plurality of demand-supply

steps in a supply chain, wherein each demand-supply step includes an order receipt

step, an order placement step, a purchase step, and a supply step;

a data input portion for inputting an order quantity;

a supply chain distribution scheme determining portion that determines a

basic scheme for the order receipt step, order placement step, purchase step and

supply step of each demand-supply step in accordance with the order quantity and at

least one stored parameter, and determines a supply chain distribution scheme by

distributing the order quantity among the plurality of demand-supply steps, based on

the basic scheme of each demand-supply step;

an index calculating portion that calculates a profitability index of the supply

chain distribution scheme based on the basic scheme determined by the supply

chain distribution scheme determining portion for each demand-supply step within

the supply chain; ~~and~~

a basic scheme adjusting portion that ~~adjusts the parameters~~ <u>changes a</u>

<u>predetermined parameter</u> of each demand-supply <u>step of the supply chain to</u>

<u>change</u>, ~~as determined by the supply chain distribution scheme determining portion,~~

~~to adjust~~ the profitability index of the supply chain ~~distribution scheme~~<u>, wherein the</u>

<u>index calculating portion calculates a first profitability index for a first version of the</u>

<u>supply chain before making said changes in the predetermined parameters, and</u>

<u>calculates a second profitability index for a second version of the supply chain after</u>

<u>making said changes in the predetermined parameters; and</u>

~~wherein the scheme determining portion selects the combination of demand-~~

~~supply steps that yield the supply chain distribution scheme~~ <u>a selecting portion for</u>

<u>establish a demand-supply scheme for manufacturing the commodity by selecting</u>

<u>the first or the second calculated version of the supply chain</u> having the highest

profitability index.